

2020 Economic Diversity

September 2021

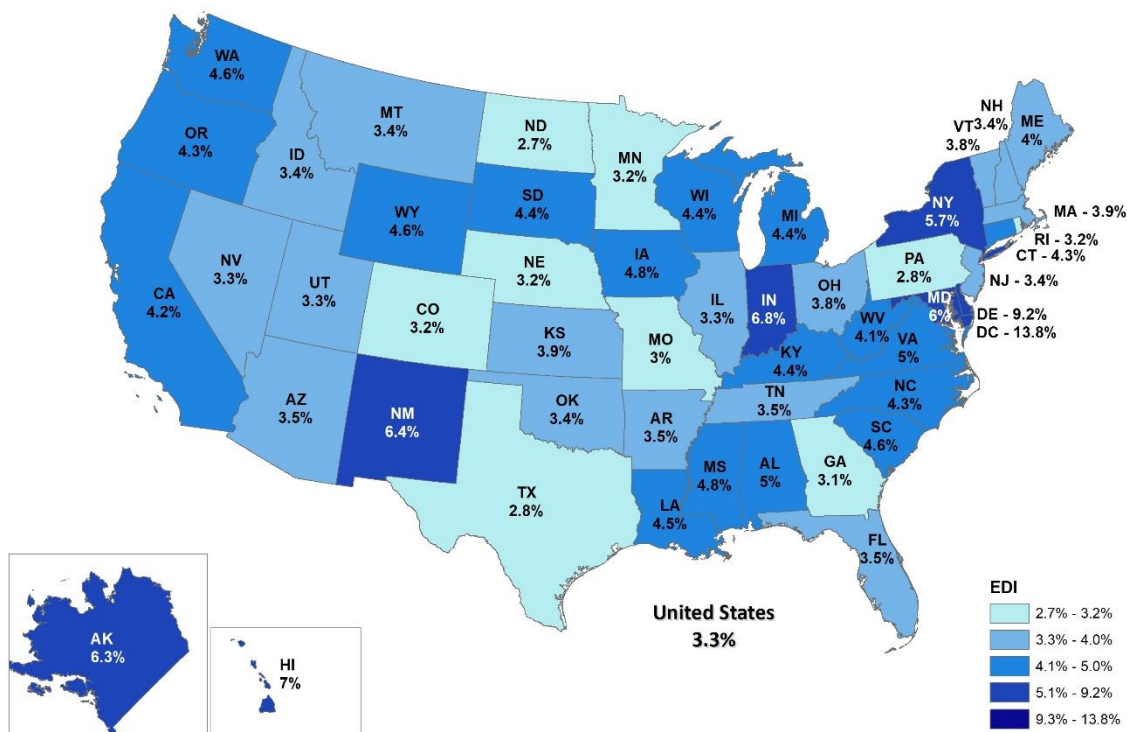


Diversification Index

A diversified economy has a variety of industries and can manage fluctuations in the business cycle. By contrast, a less diversified economy specializes in only a few industries. A state economy with a disproportionate number of workers in one specific industry could suffer if that industry experiences economic decline, whereas, a diversified economy is more balanced and capable of absorbing an economic shock through its variety of other industries. If a shock were to occur, other industries would help to compensate for the loss by maintaining economic stability for that state.

In 2020, Missouri ranked fourth in the index¹ for economic diversity, maintaining the same rank as in 2019. North Dakota was the most diversified state, followed by Pennsylvania and Texas. The map below shows each state's 2020 score. States with the most diverse economies scored the lowest.

Economic Diversity Index 2020



The lower a score, the more diversified a state's economy; the higher a score, the more specialized its economy.

Gross Domestic Product

The broadest measure of economic activity is the gross domestic product (GDP) ². In calculating each state's diversification index, the GDP by industry was measured against total state gross product.

As per latest annual GDP estimates by the U.S. Bureau of Economic Analysis, Missouri's total GDP decreased 3.6 percent from \$287.6 billion in 2019 to \$277.4 billion in 2020 in real terms representing 2012 chained dollars, adjusted for inflation. This is not surprising due to the economic effects of the COVID-19 virus, as every state in the nation experienced a decrease in GDP from 2019 to 2020. The state's top five industries are *Government* (12.1% of total GDP), *Manufacturing* (11.8%), *Real Estate, Rental and Leasing* (11.4%), *Health Care and Social Assistance* (9.3%), and *Finance and Insurance* (8.4%).

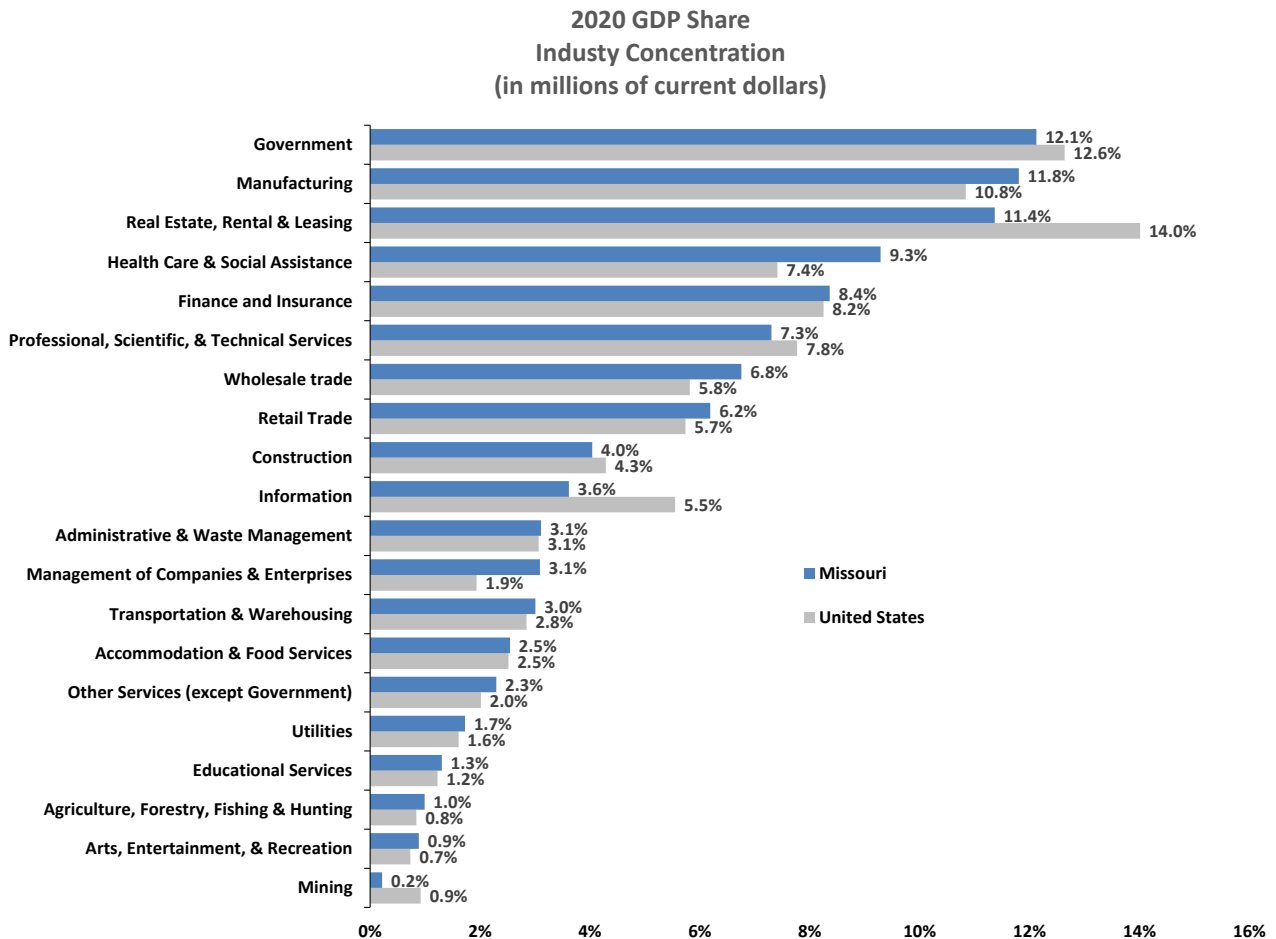
Most sectors experienced little change in GDP share between 2019 and 2020. *Real Estate, Rental and Leasing* increased 0.5 percent from 10.9 percent to 11.4 percent. *Transportation & Warehousing* and *Accommodation & Food Service* each decreased -0.5 percent.

| Missouri Industry GDP Share (in millions of current dollars) | | | |
|---|-------|-------|-----------------------|
| Industry | 2020 | 2019 | Change from 2019-2020 |
| Government | 12.1% | 11.8% | 0.3% |
| Manufacturing | 11.8% | 12.2% | -0.4% |
| Real Estate, Rental & Leasing | 11.4% | 10.9% | 0.5% |
| Health Care & Social Assistance | 9.3% | 9.3% | 0.0% |
| Finance and Insurance | 8.4% | 8.0% | 0.4% |
| Professional, Scientific, & Technical Services | 7.3% | 7.2% | 0.1% |
| Wholesale trade | 6.8% | 6.9% | -0.1% |
| Retail Trade | 6.2% | 5.8% | 0.4% |
| Construction | 4.0% | 3.8% | 0.2% |
| Information | 3.6% | 3.6% | 0.0% |
| Administrative & Waste Management | 3.1% | 3.0% | 0.1% |
| Management of Companies & Enterprises | 3.1% | 3.0% | 0.1% |
| Transportation & Warehousing | 3.0% | 3.5% | -0.5% |
| Accommodation & Food Services | 2.5% | 3.0% | -0.5% |
| Other Services (except Government) | 2.3% | 2.4% | -0.1% |
| Utilities | 1.7% | 1.7% | 0.0% |
| Educational Services | 1.3% | 1.4% | -0.1% |
| Agriculture, Forestry, Fishing & Hunting | 1.0% | 1.0% | 0.0% |
| Arts, Entertainment, & Recreation | 0.9% | 1.2% | -0.3% |
| Mining | 0.2% | 0.3% | -0.1% |

Source: Bureau of Economic Analysis

State Industry Concentration

Industry concentration is another measurement based on industry GDP share analysis. The chart below compares the same industries across Missouri and the United States to help identify state-level industry concentrations. The industries with the highest GDP share concentrations in Missouri compared to the United States are *Health Care & Social Assistance*, *Management of Companies & Enterprises*, and *Manufacturing*. *Real Estate, Rental, & Leasing* had the largest gap in GDP share compared to the U.S. (14% vs. 11.4%).



Source: Bureau of Economic Analysis

Notes:

¹Diversification Index

There are a handful of indices available to measure an economy's diversification: Herfindahl, Hachman, and competitive share among others. Data used to construct an index may include employment, earnings, per capita income, capital investment, or gross domestic product. In this brief, a modified Herfindahl Index (H_i) based on gross domestic product data was constructed.

$$H_i = \left\{ \sum_{i=1}^n \frac{1}{n} \times \left(\left(\frac{GDP_i}{GDP_s} \right) - \left(\frac{1}{n} \right) \right)^2 \right\} * 100$$

Where n is the number of industries in the state economy, and GDP is the gross domestic product for each industry (i) in the state, and GDP_s is a state's total gross domestic product. The number of industries (n) analyzed in each state (s) is constant. Thus, the analysis focuses on the distribution of GDP. Those states with an index value closer to 0 are more diversified with a more even distribution of output among industries.

²Gross Domestic Product

A state's gross domestic product (GDP) is estimated by the U.S. Bureau of Economic Analysis. This estimate is the sum of value-added from each industry in the state for a given time period. Value-added is effectively an industry's net revenue: income minus costs of production.

Data Sources: This report uses annual data from the Bureau of Economic Analysis where there is a time-release lag to ensure all data is reported in from various sectors and geographic locations.

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